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EG&G ROCKY FLATS, INC.

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February 7, 1995

95-RF-01567

Norma I. Castaneda
Environmental Restoration Division
DOE, RFFO

JANUARY 19, 1995, ECOLOGICAL RISK ASSESSMENT METHODOLOGY MEETING MINUTES -
NAH-007-95

Action: Forward meeting minutes to the Environmental Protection Agency (EPA) and Colorado
Department of Public Health and Environment (CDPHE).

This letter transmits the minutes from the ecological risk assessment methodology meeting for Technical
Memorandum (TM) 2, "Site Conceptual Model," and TM3, "Ecological Contaminant of Concern
Screening Methodology."

Please contact me at extension 6987, if you have any questions.

Neil A. Holsteen
Operable Units No. 5 - 7 Closures
Environmental Restoration Program Division

NAH:cb

Orig. and 1 cc - K. Muenchow

Attachments:
As Stated

DIST.	LTR	ENC
MARAL, M.E.		
BURLINGAME, A.H.		
BUSBY, W.S.		
BRANCH, D.B.		
CARNIVAL, G.J.		
DAVIS, J.G.		
FERRERA, D.W.		
FRAY, R.E.		
GEIS, J.A.		
GLOVER, W.S.		
GOLAN, P.M.		
HANNI, B.J.		
HARMAN, L.K.		
HEALY, T.J.		
HEDDAHL, T.		
HILBIG, J.G.		
HUTCHINS, N.M.		
JACKSON, D.T.		
KELL, R.E.		
KUESTER, A.W.		
MAARX, G.E.		
MCDONALD, M.M.		
McKENNA, F.G.		
MONTROSE, J.K.		
MORGAN, R.V.		
POTTER, G.L.		
PIZZUTO, V.M.		
RISING, T.L.		
SANDLIN, N.B.		
SCHWARTZ, J.K.		
SETLOCK, G.H.		
STEWART, D.L.		
STIGER, S.G.		
TOBIN, P.M.		
VOORHEIS, G.M.		
WILSON, J.M.		
E. A. BICKER	✓	✓
E. C. MAST	✓	✓
F. VERTICE	✓	✓
CORRES. CONTROL	X	X
ADMN RECORD/080	✓	✓
TRAFFIC		
PATS/T130G		

CLASSIFICATION:

UCNI	
UNCLASSIFIED	✓
CONFIDENTIAL	
SECRET	

AUTHORIZED CLASSIFIER
SIGNATURE
DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

IN REPLY TO RFP CC NO:

ACTION ITEM STATUS
[] PARTIAL/OPEN N/A
[] CLOSED

LTR APPROVALS:

ORIG & TYPIST INITIALS
NAH/EB

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

A 0007-000310

**Minutes and List of Attendees
for the Ecological Risk Assessment Technical Memorandum 2
Draft Sitewide Conceptual Model Revisions Meeting
at S.M. Stoller, Boulder, Colorado
Thursday, January 19, 1995, 9:00 a.m.**

The purpose of the meeting was to discuss the comments and proposed revisions for the December 1994 Draft of the Technical Memorandum 2 (TM2) Sitewide Conceptual Model (SCM). The following topics were discussed.

Document Goals

Frank Vertucci (EG&G) started the meeting with a discussion of the goals for this document. Due to schedule constraints, Stoller is unable to incorporate all supporting data before beginning the Walnut Creek ERA. Consequently, TM2 will be revised periodically to incorporate new information. Bonnie Lavelle (EPA) and Mark Wickstrom (EPA) approved and said Stoller could put the SCM together with space for unincorporated data in this draft so that current information is available to potential users.

Mark Lewis (Stoller) explained that the SCM identifies exposure parameters, key receptor species, methods for analysis, and characterizes site biology and ecology. Further, it is the groundwork for proposed future methodology and problem formulation TMs.

Frank brought up the problem of archiving data insertions and changes to the SCM and keeping track of the new insertions to the risk assessments. Neil Holsteen (EG&G) said that document control cannot help keep track of dates, but there are other ways to track the data insertions and changes to the methodology.

Jeb Love (CDPHE) wanted to be sure there is effective process control at RFETS managing work done in drainages. He did not see a problem with making changes in the document after approval, but he wanted data on paired biotic and abiotic monitoring available to him.

Mark L. explained that the present document is a screening-level risk assessment effort using conservative values so that inconsequential factors can be eliminated and data needs for the future can be addressed. Mark W. agreed that doing the problem formulation with conservative numbers and quickly addressing the data needs is a good idea. However, he did not want to lose sight of the overall goal while getting caught up with the preliminary document.

Frank stated that he would also like the SCM to function as a communication link, outlining the program, the type of information used, as well as who and where the data comes from. This document would make the information used more accessible.

Comments on the Current Document

Mark L. explained that Stoller has already incorporated most of the revisions EG&G and EPA had asked for. There were quite a few requests for data inclusion within the document for which the data is not presently available in summarized form. Stoller has presented summarized data only and indicated documents where additional/supporting data can be found.

Mark B. (EG&G) was concerned that the SCM was not identifying natural stressors (e.g., low moisture levels) to the RFETS ecosystem. Mark L. and Mark W. explained that because the SCM is a risk assessment, CERCLA directs Stoller to focus on the health-based, chemical stressors and contaminants found on the site. Frank added that the process is aimed at helping RFI/RI project managers to close out on the IHSSs and facilitate site cleanup.

Frank expressed the desire to make the comments made on the SCM open to EPA, with Norma Castenada's (DOE) approval. Bonnie said if she was interested, she would contact Neil.

Bonnie wondered why the surface soils in the IHSSs are to be analyzed separately from the surface soils below the IHSSs. Mark L. explained that there is a need for separate IHSS contaminant information.

Bonnie wondered why shallow groundwater was limited to a depth of just 6 feet or below. Mark L. explained that Stoller's intention is to use biologically relevant exposure points, so greater depths could be acceptable if relevant.

Bonnie inquired about the groundwater/surface water connection in the exposure pathway figure. Mark L. answered that the bottom line needed correction and the groundwater percolation path through the sediments to surface water needed clarification.

Mark W. wondered why Stoller had omitted soil ingestion for burrowing animals and grazing herbivores from the pathway. Mark L. answered soil is ingested directly while grooming, but the amount is very little when compared to the soil adhering to the vegetation they eat. Tissue analyses were done with whole body unwashed samples. Therefore, the soil adhering to the vegetation is taken into account. Soil ingested by burrowing animals while grooming has not been taken into account but will be considered. Frank thought the EcMP could consider a study to measure the amount of soil ingested while grooming. Mark L. said the SCM methodology will be conservative with this situation and assume 100% bioavailability. Frank added that Stoller should document the consideration.

Frank asked how the EE data will be used, and where it will be presented. Frank, Mark L., and Bonnie considered putting the data into the RI document appendix, the Problem Formulation, or the Feasibility Study. Mark L. brought up the point that this inclusion

may not be within Stoller's present scope of work. Bonnie suggested that all data available should be put into the RI documents. But Frank brought up the problem that available ecological data may be technically adequate, but some QA/QC records may not be legally defensible as determined by the recent DOE audits. This issue was not resolved.

Jeb brought up the problem of obtaining usable DOE data in electronic format, as there seems to be no systematic way of providing data to CDPHE. Frank described the Sitewide Ecological Database (SED) and EG&G's hopes of organizing ecological data into usable formats.

Bonnie wanted to change the wording on page 5-1 from "evaluating risk in areas of concern" to "areas of consideration." Mark L. agreed with this change. Bonnie also wanted clarification about whether the key receptor species had to meet all or one of the criteria on page 5-1. Mark L. clarified that just one criterion was needed for inclusion.

Mark W. questioned the key receptor species choice. Mark L. explained that there are a number of key receptor species; the list was intended to be flexible and provide ecological redundancy. Frank explained that he wanted all potential key receptor species considered at this time so that none have to be added at the last minute.

Mark W. asked why a top aquatic predator such as large-mouth bass was not considered as a key receptor species. Mark L. and Frank explained that because large-mouth bass are present only in one or two ponds, they were not appropriate inclusions. Mark W. said he understood and approved the receptor species choices.

Frank pointed out that it is difficult and controversial to determine the "natural" state of the streams because of the proposed management plans. Mark L. added that unknown or as yet unplanned management plans are hard to take into account in the risk assessments. Mark W. recommended that worst case scenarios be used to calculate risk. Mark L. said Stoller has used aquatics as a connection to terrestrial systems.

Jeb stated that he would like to see the risk assessment give direction to DOE and give them biotic information (e.g., if Western Reservoir is continuous with Walnut Creek, what happens upstream?).

Mark L. pointed out that the exposure pathway for volatilization ("ingestion") should be changed to "inhalation". Mark W. pointed out that the surface soil arrow should connect to sediment before connecting to aquatics. Mark L. concurred. Mark W. stated that he had no other major problems with the exposure scenarios used in the SCM.

Neil said the preliminary document would be done in early summer and ready to go to the trustees. Mark W. and Bonnie asked him to call it "screening level" instead of "preliminary," and to get the needed information into the Feasibility Study on schedule, requesting extensions as necessary to fill data gaps. Neil asked them to give formal approval on the SCM's next version (the Final Draft), due out in three weeks, because he

has to go on with the Problem Formulation document. Bonnie approved the situation, saying EPA will keep reviewing the exposure parameters after formal approval of the final Draft.

ECOC Technical Memorandum 3 Comments

Mark L. said the ECOC TM3 is in process. Mark W. approved use of the Oak Ridge Benchmarks.

Frank questioned whether Preble's meadow jumping mouse plutonium inhalation would become more of a concern when the document goes to the public. Mark L. explained that plutonium inhalation is not an issue with small mammals. Because their life spans are so short, their reproductive fitness is not affected by carcinogens. Frank said this is a new comment, and Stoller should address it in the ecotoxicological effects of PCOCs. Mark W. concurred.

Frank recommended EPA and CDPHE call Mark L. with basic conceptual questions or comments on the TM3 for now, since the EPA and CDPHE had courtesy copies. The next draft will require formal written comments.

Frank said the Assessment Endpoint Methodology will be out for review soon, and EG&G is particularly interested in getting comments on it from Jeb and other CDPHE personnel.

List of Attendees
Thursday January 19, 1995

Name	Organization	Phone	Fax
Neil Holsteen	EG&G	966-6987	966-8663
Frank Vertucci	EG&G	966-3427	966-3029
Mark Bakeman	EG&G	966-3666	966-3029
Alison Deans	EG&G	966-3618	966-3029
Thomas Ryon	EG&G	966-3657	966-3029
Mark Lewis	Stoller	546-4346	443-1408
Carron Meaney	Stoller	546-4414	443-1408
Anne Doud White	Stoller	546-4379	443-1408
Paul Schock	Stoller	546-4358	443-1408
Bonnie Lavelle	EPA	294-1067	294-7559
Mark Wickstrom	EPA	294-1063	293-1230
Jeb Love	CDPHE	692-3511	782-4969
Norma Casteneda	DOE	966-4226	966-4871